

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Original) A wireless user terminal having radio frequency (RF) communication capability, comprising:

a digital baseband;

an RF section;

an analog baseband coupling said digital baseband to said RF section, wherein said analog baseband further comprises:

a switch having a first lead coupled to an input and a second lead coupled to an analog-to-digital converter (ADC);

a signal clipping circuit having a first input coupled to said first input of said switch, a second input coupled to receive a first reference voltage, a third input coupled to receive a second reference voltage, and an output coupled to said second lead of said switch.

2. (Original) The wireless user terminal of claim 1 wherein said analog-to-digital converter is a sigma-delta analog-to-digital converter.

3. (Original) The wireless user terminal of claim 1 wherein said wireless user terminal is a cellular handset.

4. (Original) The wireless user terminal of claim 1 wherein said digital baseband further comprises:

- a digital signal processor (DSP);
- a microcontroller unit (MCU) coupled to said DSP; and
- an ASIC backplane coupled to said DSP and said MCU.

5. (Original) The wireless user terminal of claim 1 wherein analog baseband comprises an audio interface coupled to said DSP and to a speaker and a microphone.

6. (Original) The wireless user terminal of claim 1 wherein said analog baseband comprises an RF interface coupled to said DSP and to said RF section.

7. (Original) The wireless user terminal of claim 1 wherein said analog baseband comprises an audio interface coupled to said DSP and to a speaker and a microphone and an RF interface coupled to said DSP and to said RF section.

8. (Original) The wireless user terminal of claim 1 wherein said RF section comprises a duplexer coupling a receiver and power amplifier to an antenna.

9. (Original) The wireless user terminal of claim 8 wherein said RF section further comprises a modulator coupling said RF interface to a power amplifier.

10. (Currently amended) The wireless user terminal of claim ~~8~~¹⁰ wherein said RF section further comprises a synthesizer coupled to said modulator and to said receiver.

11. (Original) The wireless user terminal of claim 1 further including a user display and a keyboard coupled to said digital baseband.

12. (Original) The wireless user terminal of claim 4 further including a user display and a keyboard coupled to said MCU.

13. (Original) The wireless user terminal of claim 6 wherein said analog-to-digital converter is located within said RF interface.

14. (Original) The wireless user terminal of claim 6 wherein said analog-to-digital converter is located within said Audio interface.

15. (Original) The wireless user terminal of claim 1 wherein the clipping circuit comprises a first branch for clipping an output signal at an upper boundary, and a second branch for clipping the output signal at a lower boundary.

16. (Original) The wireless user terminal claim 15 wherein the first branch comprises:

a comparator having an output, a first input coupled to receive a first threshold voltage and a second input coupled to receive the input signal; and

a switch coupled to the output of the comparator, the output voltage of the comparator couples to the switch to open and close the switch.

17. (Original) The wireless user terminal of claim 16 wherein the first input of the comparator is a negative input and the second input of the comparator is a positive input.

18. (Original) The wireless user terminal of claim 15 wherein the second branch comprises:

a comparator having an output, a first input coupled to receive a first threshold voltage and a second input coupled to receive the input signal; and

a switch coupled to the output of the comparator, the output voltage of the comparator couples to the switch to open and close the switch.

19. (Original) The wireless user terminal of claim 18 wherein the first input of the comparator is a negative input and the second input of the comparator is a positive input.

20. (Original) A radio frequency (RF) enabled communications system, comprising:

a base station; and

a wireless user terminal capable of communicating with said base station via radio frequency (RF) communication, said wireless user terminal further comprising:

a digital baseband;

an RF section;

an analog baseband coupling said digital baseband to said RF section, wherein said analog baseband further comprises:

a switch having a first lead coupled to an input and a second lead coupled to an analog-to-digital converter (ADC);

a signal clipping circuit having a first input coupled to said first input of said switch, a second input coupled to receive a first reference voltage, a third input coupled to receive a second reference voltage, and an output coupled to said second lead of said switch.

21. (Original) The radio frequency (RF) enabled communications system of claim 20 wherein said analog-to-digital converter is a sigma-delta analog-to-digital converter.

22. (Original) The radio frequency (RF) enabled communications system of claim 20 wherein said wireless user terminal is a cellular handset.

23. (Original) The radio frequency (RF) enabled communications system of claim 20 wherein said digital baseband further comprises:

a digital signal processor (DSP);

a microcontroller unit (MCU) coupled to said DSP; and

an ASIC backplane coupled to said DSP and said MCU.

24. (Original) The radio frequency (RF) enabled communications system of claim 20 wherein analog baseband comprises an audio interface coupled to said DSP and to a speaker and a microphone.

25. (Original) The radio frequency (RF) enabled communications system of claim 20 wherein said analog baseband comprises an RF interface coupled to said DSP and to said RF section.

26. (Original) The radio frequency (RF) enabled communications system of claim 20 wherein said analog baseband comprises an audio interface coupled to said DSP and to a speaker and a microphone and an RF interface coupled to said DSP and to said RF section.

27. (Original) The radio frequency (RF) enabled communications system of claim 20 wherein said RF section comprises a duplexer coupling a receiver and a power amplifier to an antenna.

28. (Original) The radio frequency (RF) enabled communications system of claim 27 wherein said RF section further comprises a modulator coupling a synthesizer to said power amplifier and said receiver coupled to said synthesizer.

29. (Original) The radio frequency (RF) enabled communications system of claim 28 wherein an input of said modulator is coupled to an output of said RF interface and an output of said receiver is coupled to an input of said RF interface.

30. (Original) The radio frequency (RF) enabled communications system of claim 20 further including a user display and a keyboard coupled to said digital baseband.

31. (Original) The radio frequency (RF) enabled communications system of claim 23 further including a user display and a keyboard coupled to said MCU.

32. (Original) The radio frequency (RF) enabled communications system of claim 25 wherein said digital-to-analog converter is located within said RF interface.

33. (Original) A wireless user terminal having radio frequency (RF) communication capability, comprising:

- a digital baseband;

- an RF section;

- an analog baseband coupling said digital baseband to said RF section, wherein said analog baseband further circuitry for providing an analog-to-digital (ADC) function, wherein said circuitry comprises:

 - a first input;

 - a switch having a first lead coupled to an first input and a second lead coupled to an analog-to-digital converter (ADC);

 - a second input coupled to said analog-to-digital converter (ADC), said second input being further coupled to receive an input signal;

 - a signal clipping circuit having a first input coupled to said first input of said switch, a second input coupled to receive a first reference voltage, a third input coupled to receive a second reference voltage, and an output coupled to said second lead of said switch.

34. (Original) A wireless user terminal having radio frequency (RF) communication capability, comprising:

- circuitry for providing a digital baseband function;

- circuitry for providing an RF function;

- circuitry for providing an analog baseband function, said circuitry for providing an analog baseband function being coupled to said circuitry for providing a digital baseband function and said circuitry for providing an RF function, wherein said circuitry for providing an analog baseband function comprises:

 - a first input;

 - a switch having a first lead coupled to an first input and a second lead coupled to an analog-to-digital converter (ADC);

a second input coupled to said analog-to-digital converter (ADC), said second input being further coupled to receive an input signal;

a signal clipping circuit having a first input coupled to said first input of said switch, a second input coupled to receive a first reference voltage, a third input coupled to receive a second reference voltage, and an output coupled to said second lead of said switch.